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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/526,533

01/18/2006

Shmuel Ben-Sasson

BEN-SASSON13A

6726

1444 7590 12/09/2008  
BROWDY AND NEIMARK, P.L.L.C.  
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WASHINGTON, DC 20001-5303

EXAMINER

CHANDRA, GYAN

ART UNIT

PAPER NUMBER

1646

MAIL DATE

DELIVERY MODE

12/09/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/526,533	<b>Applicant(s)</b> BEN-SASSON ET AL.	
	<b>Examiner</b> GYAN CHANDRA	<b>Art Unit</b> 1646	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 17 November 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-14, 18-20 and 22-34 is/are pending in the application.
- 4a) Of the above claim(s) 1-6, 9-14, 18-20 and 22-31 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 7, 8 and 32-34 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 March 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>7/14/2005; 11/1/2007</u> .                                    | 6) <input type="checkbox"/> Other: _____                          |

**DETAILED ACTION**

***Election/Restrictions***

Applicant's election without traverse of Group 3 (claims 7, 8 and 32-34) in the reply filed on 11/12/2008 is acknowledged.

The requirement is still deemed proper and is therefore made FINAL.

**Status of Application, Amendments, And/Or Claims**

Claims 1-14, 18-20, and 22-34 are pending.

Claims 1-6, 9-14, 18-20, and 22-31 are withdrawn from further consideration as being drawn to a non-elected invention.

Claims 7, 8 and 32-34 are under examination.

***Information Disclosure Statement***

The Information Disclosure Statements (IDSs) of 07/14/2005 and 11/01/2007 have been considered. It is noted that the reference Martin recites the publication year as 2996, which is corrected to 1996.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 7, 8 and 32-34 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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Claims 7-8 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are:

Claim 7 (b) is not complete as the sentence stops at “the variant”

Claims 7 (c) - (e) depend from step (b).

Claims 8 and 32-34 are rejected for depending from a broad and indefinite claim (i.e., claim 7).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein

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were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

**It is noted to Applicants that, due to the objection of claim 7(b) above, the instant invention is examined to the extent it is drawn to claim 7(a). Furthermore, it is noted that the term “at least 5 amino acids” is interpreted as any protein having at least 5 amino acids corresponding to positions 143-151 of rhodopsin meet the instantly claimed limitation.**

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tsui (US Patent No. 6,130,067).

The instant claims are broadly drawn to a compound which has the property of modulation of signal transduction of a 7TM receptor consisting of: at least one moiety for transport across cellular membranes, in association with a sequence which is a continuous stretch of at least 5 amino acids present in the 7TM receptor in positions corresponding to the positions 143-151 of rhodopsin when the 2nd intracellular region of the 7TM receptor is aligned with the 2nd intracellular region of rhodopsin.

Tsui teaches a polypeptide known as ED3sb which belongs to EDG family of polypeptides which are G protein-coupled receptors (col. 3, lines34+). The amino acid residues 143-151 of EDG3sb are 100% identical to the amino acids 1-9 of the SEQ ID

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NO: 4 of the instant invention (which correspond amino acids 143-151 of rhodopsin) (see the attached sequence alignment). Tsui teaches that the polypeptide can be modified by attaching various groups such as acetylation, covalent attachment of nucleic acid, covalent attachment of a lipid or lipid derivative (col. 15, lines 31+), which meets the limitation of a moiety that plays role in transport across cellular membranes as disclosed on page 22 of the specification.

Therefore, it would have been prima facie obvious to one of ordinary skill in the art to attach a moiety such as a lipid or lipid derivative as taught by Tsui. One of ordinary skill of the art would have been motivated to attach a moiety such as a lipid or lipid derivative because such moieties are well known in the art to use for transporting across the membrane as lipid moieties are hydrophobic and easily get across a cell membrane. One would have a reasonable expectation of success in attaching such moieties with a protein or polypeptides as it is routine in the art.

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RESULT 1
US-09-082-088-2
; Sequence 2, Application US/09082088
; Patent No. 6130067
; GENERAL INFORMATION:
;   APPLICANT: TSUI, PING
;   TITLE OF INVENTION: HUMAN EDG3sb GENE
;   NUMBER OF SEQUENCES: 2
;   CORRESPONDENCE ADDRESS:
;     ADDRESSEE: Ratner & Prestia
;     STREET: P.O. Box 980
;     CITY: Valley Forge
;     STATE: PA
;     COUNTRY: USA
;     ZIP: 19482
;   COMPUTER READABLE FORM:
;     MEDIUM TYPE: Diskette
;     COMPUTER: IBM Compatible
;     OPERATING SYSTEM: DOS
;     SOFTWARE: FastSEQ for Windows Version 2.0
;   CURRENT APPLICATION DATA:
;     APPLICATION NUMBER: US/09/082,088
;     FILING DATE: 20-MAY-1998
;     CLASSIFICATION:
;   PRIOR APPLICATION DATA:
;     APPLICATION NUMBER:
;     FILING DATE:
;   ATTORNEY/AGENT INFORMATION:
;     NAME: Prestia, Paul F
;     REGISTRATION NUMBER: 23,031
;     REFERENCE/DOCKET NUMBER: GP-70453
;   TELECOMMUNICATION INFORMATION:
;     TELEPHONE: 610-407-0700
;     TELEFAX: 610-407-0701
;     TELEX:
;   INFORMATION FOR SEQ ID NO: 2:
;     SEQUENCE CHARACTERISTICS:
;       LENGTH: 378 amino acids
;       TYPE: amino acid
;       STRANDEDNESS: single
;       TOPOLOGY: linear
;     MOLECULE TYPE: protein
US-09-082-088-2

Query Match          100.0%; Score 50; DB 2; Length 378;
Best Local Similarity 100.0%; Pred. No. 0.07;
Matches      9; Conservative      0; Mismatches      0; Indels      0; Gaps      0;

Qy          1 MRPYDANKR 9
             |||||
Db          143 MRPYDANKR 151
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### **Conclusion**

No claim is allowed.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to GYAN CHANDRA whose telephone number is (571)272-2922. The examiner can normally be reached on 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gary Nickol can be reached on (571) 272-0835. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Gyan Chandra  
Art Unit 1646  
02 December 2008  
Fax: 571-273-2922

/Robert Landsman/  
Primary Examiner, Art Unit 1647